

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Maguire et al.

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Art Unit: 2623

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Examiner: Ingvoldstad, B.

Invention: Data Correlation and Analysis Tool

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**FILED BY USPTO ELECTRONIC FILING SYSTEM**

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**MAIL STOP RCE**

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

RESPONSE ACCOMPANYNG RCE

Dear Sir:

In Response to the office action dated September 10, 2008, Applicants file the accompanying RCE, submit a Declaration under 37 C.F.R. §1.131 and present the following remarks.

**Amendments to the Claims** are listed beginning on page 2 of this paper.

**Remarks** begin on page 9 of this paper.

**Amendments to the Claims:**

This listing of claims replaces all prior versions, and listings, of claims in the application:

**Listing of the claims:**

1.-48. (cancelled)

49. (Previously presented) A method of analyzing responses to at least one stimulus stream, the method comprising:

showing the at least one stimulus stream to one or more respondents;

partitioning the at least one stimulus stream into a series of time slices;

associating stimuli in the at least one stimulus stream with the time slice in which each stimulus occurs;

associating responses of the one or more respondents to the at least one stimulus stream with the time slices in which each response is made; and

storing an associative mapping for the at least one stimulus stream that correlates each of the time slices with the stimuli and the responses.

50. (Previously presented) The method of claim 49 wherein the at least one stimulus stream comprises a video stream and wherein stimuli comprise objects that appear in one or more of the time slices and wherein associating stimuli comprises determining whether one of the objects is present in a time slice of the video stream.

51. (Previously presented) The method of claim 50 wherein one of the objects comprises a person.

52. (Previously presented) The method of claim 50 wherein the at least one stimulus stream further comprises an audio stream.

53. (Previously presented) The method of claim 52 further comprising analyzing the audio stream to produce text strings.

54. (Previously presented) The method of claim 53 wherein associating stimuli further comprises determining whether one of the text strings is present in a time slice of the audio stream.

55. (Previously presented) The method of claim 52 wherein the associative mapping comprises a multi-channel associative mapping.

56. (Previously presented) The method of claim 49 further comprising logging locations of stored frames of the at least one stimulus stream and associating the stored frames with the time slices so that the associative mapping correlates stimuli, responses and stored frames.

57. (Previously presented) The method of claim 49 wherein associating stimuli comprises indicating whether or not a stimulus is present in each of the time slices.

58. (Previously presented) The method of claim 49 further comprising accessing the associative mapping by one or more of the responses.

59. (Previously presented) The method of claim 49 further comprising measuring an environmental condition and associating the measurements with the time slices.

60. (Previously presented) A computer readable medium encoded with a computer program for analyzing responses to at least one stimulus stream partitioned into a series of time slices, the computer program code comprising:

program code for associating stimuli in the at least one stimulus stream with the time slice in which each stimulus occurs;

program code for associating responses to the at least one stimulus stream with the time slices in which each response is made; and

program code for storing an associative mapping for the at least one stimulus stream that correlates each of the time slices with the stimuli and the responses.

61. (Previously presented) The computer readable medium of claim 60 wherein the at least one stimulus stream comprises a video stream and wherein stimuli comprise objects that appear in one or more of the time slices and wherein the program code for associating stimuli comprises program code for determining whether one of the objects is present in a time slice of the video stream.

62. (Previously presented) The computer readable medium of claim 61 wherein the at least one stimulus stream further comprises an audio stream.

63. (Previously presented) The computer readable medium of claim 62 further comprising program code for analyzing the audio stream to produce text strings.

64. (Previously presented) The computer readable medium of claim 63 wherein the program code for associating stimuli further comprises program code for determining whether one of the text strings is present in a time slice of the audio stream.

65. (Previously presented) The computer readable medium of claim 62 wherein the associative mapping comprises a multi-channel associative mapping.

66. (Previously presented) The computer readable medium of claim 60 further comprising program code for logging locations of stored frames of the at least one stimulus stream and associating the stored frames with the time slices so that the associative mapping correlates stimuli, responses and stored frames.

67. (Previously presented) The computer readable medium of claim 60 wherein the program code for associating stimuli comprises program code for storing indications of whether or not a stimulus is present in each of the time slices.

68. (Previously presented) The computer readable medium of claim 60 further comprising program code for accessing the associative mapping by one or more of the responses.

69. (Previously presented) The computer readable medium of claim 60 further comprising program code for associating measurements of environmental conditions with the time slices.

70. (Previously presented) An apparatus for analyzing responses to at least one stimulus stream comprising:

- an input for receiving responses from one or more respondents to the at least one stimulus stream;

- a correlator for correlating the responses and a plurality of stimuli in the at least one stimulus stream with time slices of the stimulus stream to generate an associative mapping of the responses and the stimuli with the time slices of the stimulus stream; and

- a storage module operatively coupled with the correlator, the storage module storing the associative mapping.

71. (Previously presented) The apparatus of claim 70 wherein the at least one stimulus stream further comprises an audio stream.

72. (Previously presented) The apparatus of claim 71 further comprising an automatic audio analyzer for analyzing the audio stream to produce text strings.

73. (Previously presented) The apparatus of claim 71 wherein the associative mapping comprises a multi-channel associative mapping.

74. (Previously presented) The apparatus of claim 70 further comprising a multi-channel associative cache for storing the associative mapping.

75. (Previously presented) The apparatus of claim 70 further comprising a log of locations of stored frames of the at least one stimulus stream and wherein the correlator further correlates the stored frames with the time slices of the at least one stimulus stream so that the associative mapping correlates stimuli, responses and stored frames.

76. (New) The method of claim 49 further comprising:  
prompting a user on a display for search criteria; and  
displaying to the user playback of the one or more time slices of the at least one stimulus stream responsive to the search criteria.

77. (New) The apparatus of claim 70 wherein the correlator includes a processor for digitally processing the stimulus stream as a digital signal with a series of time slices.

78. (New) The apparatus of claim 77 further comprising a user interface operatively coupled with the storage module, the interface allowing an operator to search in the associative mapping and retrieve for display any of time slices of the stimulus stream and analyses of the responses, wherein playback of the time slices of the stimulus stream may be displayed on the user interface.

79. (New) The apparatus of claim 70 wherein the stimulus stream comprises a time-delayed presentation.

80. (New) An apparatus for analyzing a response to a stimulus, the apparatus comprising:

- a stimulus input that receives a stimulus signal representing the stimulus;
- a response input that receives at least one response signal, each response signal being indicative of a response to the stimulus at a time slice of the received stimulus signal; and
- a correlator coupled with the stimulus input and the response input, the correlator correlating digitally stored time slices of the received stimulus signal with each received response signal as a function of time to produce an associative mapping.

81. (New) The apparatus as defined by claim 80 wherein the associative mapping is stored in an associative cache.

82. (New) The apparatus as defined by claim 80 wherein each digitally stored time slice of the stimulus signal comprises a frame of video, the associative mapping correlating each frame with a portion of each response signal.

83. (New) The apparatus as defined by claim 80 further comprising a sensor input that receives a sensor signal representing an environmental condition, wherein the correlator further correlates the sensor signal with the digitally stored time slices of the received stimulus signal and each received response signal as a function of time to produce the associative mapping.

84. (New) The apparatus as defined by claim 80 wherein the stimulus comprises a time-delayed presentation.

85. (New) The apparatus as defined by claim 80 further comprising:  
an output that directs an output signal to a display device, the output signal including data for displaying the associative mapping contemporaneously with the creation thereof.

86. (New) The apparatus as defined by claim 80 wherein the response input receives at least a first group of responses having first variables, and a second group of responses having second variables, at least one variable being different between the first group and the second group, the first group being disposed at a first angle to the stimulus that differs from a second angle of the second group to the stimulus.

87. (New) An apparatus as defined by claim 80 wherein the correlator includes a previously stored stimulus signal to compare against the received stimulus signal and

generate a difference signal representative of the differences between the received stimulus signal and the previously stored signal.

88. (New) The apparatus as defined by claim 87 wherein the processor alarms if the difference signal exceeds a threshold value.

89. (New) The apparatus as defined by claim 80 further comprising:  
an analyzer in electrical communication with the correlator, the analyzer adapted to perform statistical analysis on the response signals from the response input to find selected segments of the stimulus signal.



### **REMARKS**

Claims 49-62, 65-71, 73 and 75 were rejected under 35 U.S.C. 102(e) as being anticipated by Leroy. Claim 74 was rejected under 35 U.S.C. 103(a) as being unpatentable over Leroy. Claim 63-64 and 72 were rejected under 35 U.S.C. 103(a) as being unpatentable over Leroy in view of Lyberg. Applicants submit herewith their Declaration Under 37 C.F.R. 1.131 to remove Leroy as a prior art reference. Applicants completed their claimed invention prior to the filing date of Leroy. Applicants filed their patent application before the Leroy patent issued. Therefore, Leroy is not prior art and cannot be the basis of a rejection. The rejections have been overcome and the claims should be allowed.

New claims 76-89 have been added to more accurately and completely claim a fuller scope of Applicants' invention. Claim 76 further distinguishes over Leroy, even if it were prior art, on the grounds a user may be prompted to provide search criteria and thereafter cause the display of one or more time slices of the at least one stimulus stream in response to submitting the search criteria. Leroy does not disclose such a search and display system or method. Indeed Leroy does not suggest an associative map that stores time slices of the stimulus stream that can be thereafter played back on the user display in response to search criteria.

Claim 77 also further distinguishes over Leroy with a correlator that produces a processor for digitally processing the stimulus stream as a digital signal. Claim 78 further adds the search and retrieval of time slices of the digital signal stimulus stream.

New claim 80 is directed to an apparatus that includes a correlator that correlates digitally stored time slices of the received stimulus signal with the response signal as a function of time to produce an associative mapping. As such, claim 80 and claims 80-89 depending therefrom more fully distinguish over Leroy.

Given the above considerations, Applicants respectfully request the Examiner to consider the new claims filed herewith. Applicants submit that all of the claims distinguish over the cited art and early notice to that effect is respectfully solicited.

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Respectfully submitted,

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